

Notice of Allowability**Application No.**

10/500,958

Applicant(s)

SHIPP, ALEXANDER

Examiner

Alicia M. Lewis

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendments filed 7/18/08 and Interview of 9/23/08.
2. ☒ The allowed claim(s) is/are 1-8 and 13-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/23/2008.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Shea on September 23, 2008.

The application has been amended as follows: Please replace the current claims (filed 7/18/08) with the following claims:

Claim 1. A content scanning system for electronic documents such as emails comprising:

- a) a link analyser configured to identify hyperlinks in content of electronic documents;
- b) a hyperlink replacer configured to modify the electronic documents by replacing hyperlinks to external objects identified by the link analyser by new hyperlinks to respective targets on a trusted server;
- c) a link database, the hyperlink replacer being configured to store in the link database data relating the replaced hyperlinks to the new hyperlinks; and
- d) an object server hosted on a server machine and configured, on receipt of a request to retrieve an external object from one of said targets on the trusted server

when a new hyperlink to said one of said targets is selected, to use the data stored in the link database to determine the replaced hyperlink which was replaced by the new hyperlink, to retrieve the external object referenced by the thus determined, replaced hyperlink, and to cause a content scanner to scan the retrieved external object and to determine the acceptability of the retrieved external object according to predefined rules, the object server being configured, responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be acceptable, to supply the retrieved external object in response to the request, and the object server being configured, responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be unacceptable, to perform remedial action.

Claim 2. The system according to claim 1 wherein the link analyser and the object server are configured to recursively process hyperlinks identified in external objects.

Claim 3. The system according to claim 2 in which only a maximum depth of recursion is permitted and the document is flagged as unacceptable if that limit is reached.

Claim 4. The system according to claim 1 wherein the remedial action comprises one or more of:

flagging or modifying the document to indicate that the content scanner has found the object to be unacceptable;

modifying the document by replacing the hyperlink by a non-functional hyperlink; and

quarantining the document and sending the intended recipient an alert advising the recipient that this has been done.

Claim 5. A computer-implemented method of content-scanning electronic documents such as emails comprising:

a) using a link analyser to identify hyperlinks in content of electronic documents;

b) modifying the electronic documents by replacing hyperlinks to external objects identified by the link analyser by new hyperlinks to respective targets on a trusted server and storing data relating said replaced hyperlinks to said new hyperlinks;

c) responsive to a request to retrieve an external object from one of said targets on the trusted server when a new hyperlink to said one of said targets is selected, using the stored data to determine the replaced hyperlink which was replaced by the new hyperlink, retrieving the external object referenced by the thus determined, replaced hyperlink, and using a content scanner to scan the retrieved external object and to determine the acceptability of the retrieved external object according to predefined rules;

d) responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be acceptable, supplying the retrieved external object in response to the request; and

e) responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be unacceptable, performing remedial action.

Claim 6. The method according to claim 5 wherein the steps a) through e) are used recursively to process hyperlinks identified in external objects.

Claim 7. The method according to claim 6 in which only a maximum depth of recursion is permitted and the document is flagged as unacceptable if that limit is reached.

Claim 8. The method according to claim 5, wherein the remedial action comprises one or more of:

flagging or modifying the document to indicate that the content scanner has found the object to be unacceptable;

modifying the document by replacing the hyperlink by a non-functional hyperlink;
and

quarantining the document and sending the intended recipient an alert advising the recipient that this has been done.

Claim 13. The system according to claim 1, wherein the object server is configured, responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be acceptable, further to store the retrieved external object on the trusted server.

Claim 14. The method according to claim 5, wherein the step of supplying the retrieved external object in response to the request, responsive to the replaced hyperlink being to an external object which is determined by the content scanner to be acceptable, further comprises storing the retrieved external object on the trusted scanner.

Claim 15. A computer-implemented method of content-scanning electronic documents comprising:

- a) identifying first hyperlinks in contents of electronic documents;
- b) modifying the electronic documents by replacing the identified first hyperlinks with different second hyperlinks which point to a trusted server;
- c) storing data to relate the second hyperlinks to the first hyperlinks;
- d) in response to a request received by the trusted server when one of the second hyperlinks is selected, using the stored data to determine the first hyperlink corresponding to the selected second hyperlink and retrieving an object using the determined first hyperlink;
- e) scanning the retrieved object in accordance with specified rules;

- f) making the retrieved object available in response to the received request if the retrieved object is determined to be acceptable in accordance with the specified rules; and
- g) performing remedial action if the retrieved object is not determined to be acceptable in accordance with the specified rules.

Claim 16. The method according to claim 15, further comprising:
generating the second hyperlinks based on one or more of a name of the trusted server, a time, a process identifier, a count that increments for each second hyperlink and a random number.

Claim 17. An e-mail gateway comprising a trusted server configured to scan e-mail, the trusted server programmed to perform operations comprising:

- a) identifying first hyperlinks in contents of e-mails;
- b) modifying the e-mails by replacing the identified first hyperlinks with different second hyperlinks which point to a trusted server;
- c) storing data that relates the second hyperlinks to the first hyperlinks;
- d) in response to a request received by the trusted server when one of the second hyperlinks is selected, using the stored data to determine the first hyperlink corresponding to the selected second hyperlink and retrieving an object using the determined first hyperlink;
- e) scanning the retrieved object in accordance with specified rules;

- f) making the retrieved object available in response to the received request if the retrieved object is determined to be acceptable in accordance with the specified rules; and
- g) performing remedial action if the retrieved object is not determined to be acceptable in accordance with the specified rules.

Claim 18. The e-mail gateway according to claim 17, wherein the trusted server is programmed to perform further operations comprising:

- identifying a third hyperlink in the retrieved object;
- modifying the retrieved object by replacing the identified third hyperlink with a different fourth hyperlink which points to the trusted server; and
- storing data that relates the fourth hyperlink to the third hyperlink.

Claim 19. The e-mail gateway according to claim 18, wherein the trusted server is programmed to perform further operations comprising:

- in response to a request received by the trusted server when the fourth hyperlink is selected, using the stored data to determine the third hyperlink corresponding to the selected fourth hyperlink and retrieving another object using the determined third hyperlink;
- scanning the retrieved other object in accordance with specified rules;

making the retrieved other object available in response to the received request if the retrieved other object is determined to be acceptable in accordance with the specified rules; and

performing remedial action if the retrieved other object is not determined to be acceptable in accordance with the specified rules.

2. Claims 9-12 were previously canceled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M. L./
Examiner, Art Unit 2164

/Charles Rones/
Supervisory Patent Examiner, Art Unit 2164